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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,857	01/12/2001	Peter Miller	AP5077ES	2389
22917	7590	08/16/2004	EXAMINER	
MOTOROLA, INC. 1303 EAST ALGONQUIN ROAD IL01/3RD SCHAUMBURG, IL 60196			VARTANIAN, HARRY	
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/759,857

Applicant(s)

MILLER ET AL.

Examiner

Harry Vartanian

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/12/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2634

Detailed Action

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. **The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided.** PLEASE REMOVE THIS LANGUAGE. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The disclosure is objected to because of the following informalities: in para 16 of PG PUB 2001/0008548 it is stated "the capacitor 102" when the drawing shows the TxduC terminal is coupled to capacitor 104.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Lam(United States Patent# 4,425,663). Regarding Claim 1, Lam meets the following limitations of the Claim:

receiving means for receiving digital signals relative to a first ground potential; **fig 1**

transformer means coupled to the receiving means for passing edges of signals received at the receiving means; **(Column 4, Lines 5-24) (Column 3, Lines 41-63)**

reconstruction means coupled to the transformer means for reconstructing signals from the edges of signals passed by the transformer means, so as to produce digital signals relative to a second ground potential. **fig 1 (Column 4, Lines 5-24) (Column 3, Lines 41-63)**

Regarding Claim 2, Lam meets the following limitations of the Claim:

wherein the reconstruction means comprises Schmitt trigger means. **Fig 1, Item 48; (Column 1, Lines 52-58)**

Regarding Claim 7, Lam meets the following limitations of the Claim:

first receiving means for receiving digital signals, relative to a first ground potential, for transmission on the bus; **fig 1**

first transformer means coupled to the first receiving means for passing edges of signals received at the first receiving means; **(Column 4, Lines 5-24)**

first reconstruction means coupled to the first transformer means for reconstructing signals from the edges of signals passed by the first transformer means, so as to produce digital signals, relative to a second ground potential, for transmission on the bus; **(Column 4, Lines 5-24) (Column 3, Lines 41-63)**

second receiving means for receiving digital signals, relative to the second ground potential, from the bus; **fig 1**

second transformer means coupled to the second receiving means for passing edges of signals received at the second receiving means; **fig 1; (Column 4, Lines 5-24) (Column 3, Lines 41-63)**

second reconstruction means coupled to the second transformer means for reconstructing signals from the edges of signals passed by the second transformer means, so as to produce digital signals, relative to the first ground potential, from the bus. **(Column 4, Lines 5-24)**

Art Unit: 2634

Regarding Claim 8, Lam meets the following limitations of the Claim:

wherein the first and second reconstruction means comprise respectively first and second Schmitt trigger means. **Fig 1**

Regarding Claim 9, Lam meets the following limitations of the Claim:

receiving digital signals relative to a first ground potential; **(Column 4, Lines 5-24) (Column 3, Lines 41-63)**

applying the received digital signals to transformer means to pass edges of the received digital signals; **(Column 4, Lines 5-24) (Column 3, Lines 41-63)**

reconstructing signals from the signal edges passed by the transformer means so as to produce digital signals relative to a second ground potential. **(Column 4, Lines 5-24) (Column 3, Lines 41-63)**

Regarding Claim 10, Lam meets the following limitations of the Claim:

the step of reconstructing comprises applying the signal edges passed by the transformer means to Schmitt trigger means so as to produce digital signals relative to a second ground potential. **Fig 2; Fig 1**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lam(United States Patent# 4,425,663) in view Webb et al(United States Patent# 6,130,505). Lam

Art Unit: 2634

meets all the limitations of Claim 3(see above rejections) except for DC biasing the input signal within the levels of the Schmitt circuit.

However, Webb et al meets the following limitations of the Claim:

wherein the Schmitt trigger means comprises bias means for biasing the DC level of the edge signals between the trigger levels of the Schmitt trigger means. **(Column 10, Lines 38-50)**

Therefor it would have been prima obvious for DC biasing an input signal to the levels required by the Schmitt trigger. A motivation to combine is that an input signal must be within the dc bias point of a Schmitt operating range in order for it work properly. This is confirmed by Sedra and Smith in Microelectronic Circuit's section 13.4.4-13.4.7 fourth edition.

7. Claim 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lam(United States Patent# 4,425,663) in view Webb et al(United States Patent# 6,130,505) further in view of Khayat (United States Patent# 5,336,942). Lam and Webb et al meet all the limitations of Claim 4(see above rejections) except disclosing the use of an oscillator for making the Schmitt circuit temperature invariable.

However, Khayat meets the following limitations of the Claim:

wherein the reconstruction means further comprises oscillator means coupled to the Schmitt trigger means for setting the bias point of the Schmitt trigger means to reduce the temperature variability thereof. **Claim 3**

Therefor it would have been prima obvious for biasing the Schmitt trigger in way to reduce temperature variability. A motivation to combine is disclosed by Khayat wherein he states that making a Schmitt circuit temperature invariant can improve speed and the hysteresis of the circuit(Column 2, Lines 20-42).

Regarding Claim 5, Khayat meets the following limitations of the Claim:

wherein the oscillator means comprises a Schmitt trigger arrangement. **(Column 10, Lines 38-50)**

Art Unit: 2634

8. Claim 6 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lam(United States Patent# 4,425,663) in view Webb et al(United States Patent# 6,130,505) further in view of Khayat (United States Patent# 5,336,942).

Lam, Web, and Khayat meet all the limitations of the Claim(see above paragraphs), except disclosing that the pair of Schmitt triggers are all on the same die.

At the time the invention was made, it would have been to a person of ordinary skill in the art to have Lam's circuit arrangement on the same die. Applicant has not disclosed that having both circuits on the same die provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with putting Lam's circuit on the same semiconductor material because it would reduce the circuit board space for the ECU computer.

Therefore, it would have been obvious to one of ordinary skill in this art to modify Lam to obtain the invention as specified in claim 6.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry Vartanian whose telephone number is 703.305.8698. The examiner can normally be reached on 10:00-6:30 Mondays to Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703.305.4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2634

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Harry Vartanian
Examiner
Art Unit 2634

HV



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